$\qquad$
Directions: Match each equation first with a description of the transformations of the equation (number match) and then with its graph (letter match).

$$
y=3^{x}
$$

Number Match: $\qquad$
Letter Match: $\qquad$
$y=3^{-x}$
Number Match: $\qquad$
Letter Match: $\qquad$
$y=3^{x}-4$
Number Match: $\qquad$
Letter Match: $\qquad$
$y=-3^{x-2}$
Number Match: $\qquad$
Letter Match: $\qquad$
$y=-3^{-x}$
Number Match: $\qquad$
Letter Match: $\qquad$
$y=3^{x}+1$
Number Match: $\qquad$
Letter Match: $\qquad$
b.

f.

c.

g .

$y=-3^{x}$
Number Match: $\qquad$
Letter Match: $\qquad$
$y=3^{x-2}$
Number Match: $\qquad$
Letter Match: $\qquad$

1. $y=3^{x}$ reflected over the x axis and shifted right two
2. $y=3^{x}$ with no transformations
3. $y=3^{x}$ reflected over the $y$-axis
4. $y=3^{x}$ shifted up 1
5. $y=3^{x}$ shifted right 2
6. $y=3^{x}$ reflected over the x and y axis
7. $y=3^{x}$ shifted down 4
8. $y=3^{x}$ reflected over the x axis

Answer Key:
2D
3E
7F
1G
6H
4A
8C
5B

